Changes in quality of fresh-cut wax-apple (Syzygiumsamarangense) as affected by storage and cut-sizes

ABSTRACT

Wax apple (Syzygium samarangense) is a tropical fruit with attractive appearance and thirst-relieving properties, offering a unique apple-like crispness, watery-sweet, low-acid taste and the aroma of roses. Compared to whole fruit, fresh-cut fruits are more perishable due to high respiration, ethylene production, and membrane degradation, thus reducing fruit usage. This paper reports the effect of storage period and cut sizes on quality of fresh-cut wax apples. Fresh wax apple fruits were prepared according to the treatments: whole, halved (1/2), quartered (1/4), and wedged (1/8) and stored in a domestic refrigerator (4°C), in a clear plastic container (ca. 260-280 g). Results showed that there was a significant interaction between storage period and cut sizes on weight loss. Samples stored as whole lost the least amount of water. Weight loss for all cut sizes were less than 1.6%. The firmness of wax apple on day 9 of storage was significantly lower than their initial firmness. The whole fruit was found to be softer than the freshly cut samples. Total soluble solids content decreased with the time of storage, reduced from 7.6 to 6.2 °Brix as the storage period extended from day 0 to day 9 irrespective of cutting sizes. Titratable acidity increased significantly from day 0 to day 3 of storage for halved, quartered and wedged fruit. The concentration of ascorbic acid decreased significantly throughout the period of storage. Overall, results clearly showed that storage period markedly affected the physico-chemical properties of wax apples regardless of their cut sizes but not to the extent that the quality of fresh-cut wax apple was reduced.

Keyword: Wax apple; Fresh-cut fruit; Fruit quality